



**REGIONAL WORKSHOP ON
INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
FOR SURVEILLANCE SYSTEM
ADB/GMS-HEALTH SECURITY PROJECT
(CAMBODIA, LAO PDR, MYANMAR AND VIETNAM)
5-6 SEPTEMBER 2019
SOMADEVI ANGKOR HOTEL, SIEM REAP, CAMBODIA.**

CONCISE WORKSHOP REPORT

Prepared by
Krishna Vinjam
(Rapporteur)

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1. Preface

The Ministry of Health of the Royal Government of Cambodia, the Executing Agency of the GMS Health Security Project (Loan 3464-CAM), is pleased to provide the following information to participants of the Regional Workshop on ICT Application for the Surveillance System held from 5-6 September 2019 at Hotel SOMADEVI ANGKOR Resort and Spa, Siem Reap, Kingdom of Cambodia.

During this Regional Workshop, the following were discussed: (i) Preliminary assessment of current ICT support for Health System in CLMV countries; and (ii) Future of ICT for supporting health cooperation (identified regional health and health cooperation).

The Regional Workshop on ICT application for surveillance system was opened by the Secretary of State, Ministry of Health of Cambodia. Workshop sessions ran for 2 days (**5– 6 September 2019**). Sessions were alternatively chaired and co-chaired by designated country delegates. The chairs and reporters for group discussions were selected by the groups, based on country team proposals to be indicated prior to the workshop.

Abbreviations

ADB	Asian Development Bank
CLMV	Cambodia, Lao PDR, Myanmar and Vietnam
CDs	Communicable Diseases
CBS	Case-Base Surveillance
EBS	Event-based surveillance
EOC	Emergency Operation Center
GMS	Greater Mekong Subregion
IBS	Indicator-Based Surveillance
ICT	Information and Communication Technology
HEF	Health Equity Fund
HMIS	Health Management Information System
HIS	Hospital Information System
ILI	Influenza like illness
MEV	Mobile Population, ethnic minorities, and other vulnerable groups
MOH	Ministry of Health
MPTC	Ministry of Posts and Telecommunications
NCDs	Non-communicable Diseases

PMRS	Patients Medical Registration System
SARI	Severe Acute Respiratory Illness
SOP	Standard Operating Procedure
TC	Telecom Cambodia
WHO	World Health Organization

2. Introduction

This was one of the regional activities organized by Cambodia in 2019. It was the first workshop to discuss Information and Communication Technology (ICT) in health within the context of digital health. The concept note, which was attached to this report, indicated the ample opportunity for introduction of ICT in health including growing internet access and digital literacy among health staff and increasing number of population in the region.

It also highlighted the growing demand on telemedicine, receiving remote consultation, diagnosis, and treatment from specialists in far off hospitals as well as its role in surveillance team for reporting diseases during the outbreaks. It also indicated the important role of ICT in regional cooperation to enhance the International Health Regulation (2005), including health service network expanded to support the marginalized groups, mobile population, ethnic minorities, and other vulnerable groups (MEV).

Some challenges such as improvement of (i) integrated and/or interoperability for health management information system, including alerting system for diseases outbreak response; (ii) ICT at health facility levels (National Hospitals, Provincial Hospitals, District Hospitals, and Health Centers); and (iii) ICT to support the marginalized group such as migrant people to access the proper health services.

3. Objective

The objective of the regional workshop was to share current status, challenges, and solutions in applying ICT to improve health systems in each individual CLMV and in the region.

Specific Objectives:

Preliminary assessment of current ICT support for Health System in CLMV countries;
Future of ICT for supporting health cooperation (identified regional health and health cooperation).

Expected output:

Lesson learned from current ICT and country future plan to support the Health System in CLMV countries and the region;
ICT regional plan for supporting health cooperation to be developed.

4. Executive Summary of findings

1. All countries have applied ICT in health in various modalities at different levels: National Health Information System, Vertical Programs such as HIV/AIDS, TB, and Immunization, etc. Digital health to focus on population access to good quality health services was also available but its application by the GMS countries has been limited.
2. Most of the ICT applications used for reporting purposes and are not fully automated. Some of them are signing on pilot basis in township area were for different reasons such as lack of human resources, lack of supporting infrastructure such as internet connection, and limited funding available (finding driven design).
3. All countries implemented ICT for public health services and public hospitals only while the inclusion of private sector in the ICT system remains a challenge. All countries agreed that there should be an established sound mechanism that attracts private sector to participate in ICT management system and make it more holistic to benefit the planning and decision making.
4. There are several digital health service providers worldwide and some have been demonstrating satisfactory performance but many of them have no proof of their performance
5. Data quality is being controlled manually by responsible staff. Most of the existing ICT applications have not included automated data quality control.
6. There is a need to strengthen cooperation in controlling several diseases such as H5N1, Ebola, MERS-CoV, Dengue, Rabies, Hand foot mouth disease, Malaria, Tuberculosis, Cholera, etc.. All countries agreed that development of Mobile App (For Android & iOS) using a standard platform for information sharing, referral system supported with very well coordinated structures of PoE, EOC and emergency contact mechanism would improve the regional cooperation activities.
7. Mobile App should focus on migrant workers/ tourist/business travellers who have difficulties to access health care services when they are out of the countries, forest goers who get sick when they are at the border/cross border and soldiers at border areas. Mobile App for these groups should contain online works and offline features to ensure accessibility, and linked to resource maps that consist of location/info of nearby health care facilities.
8. All countries agree that is important to expand HIS computerization at all levels.

9. Insufficient training on the implementation of HMIS and other software program was a constraint in maintaining operation and data quality. The training could include IT literacy' and data management
10. The importance of integrated data from different sources into only one system to facilitate management information and reduce the burden on staff turn-around was also highlighted.
11. The current system management weakness is the lack of regular analysis and interpretation of disease outbreak alert and response. The national hospital has no alert system for outbreak cases, except the 115 telephone reporting system. Alerting system could be integrated into hospital management information system or laboratory management system.
12. The issue of lack of dedicated staff for data entry/report for the surveillance system was raise as the current system needs staff to control data with limited automation control.
13. Patient ID is important. There is a suggestion to consider the establishment of the patient ID in the near future.
14. Staff turn-around issue was raised by all countries. It needs to find motivation mechanisms including financial and non-financial benefits such as continuous training and capacity building on ICT and high-level technology.
15. The current system needs a lot of staff to do data entry in all levels of the hospital, raising the question on efficiency. The more integrated hospital management system was also discussed.
16. To manage the IT and best ICT support find different business models like outsourcing the support work to IT company or go with PPP model, where possible, to ensure sustainability.
17. CLMV countries should conduct 2 or 3 workshops in a year to discuss current issues on ICT systems and how these issues were solved in their countries. This knowledge will help/guide them to solve issues raised regarding features of their ICT systems.
18. Seeking financial support from Government, stakeholder, ADB, and related networks to support development, implementation, and maintenance of ICT and its related infrastructure (Computers, servers).

5. Outputs by Session

05TH SEPTEMBER 2019, THURSDAY

5.1. MORNING SESSION

5.1.1. Opening Session

Master of Ceremony – Mr. Mom Vortana, Project Management Unit, MOH Cambodia.

Welcome Notes:

- Dr. Southanou Nanthanonty, Deputy Director Department of Planning and Cooperation and GMS Health Security Project, Lao PDR.
- Dr. Chaw Nande, Deputy Director Department of Medical Services, Myanmar.
- Dr. Tran Van Tien, Project Officer GMS health Security Project, Vietnam.
- Dr. Kyi Thar, Public Health Expert, ADB

Opening Address by His Excellency - Prof. ENG Huot, Secretary of State for Health, MOH, Cambodia. A brief explanation of the following points:

- ICT playing a big role in everyone's life, now it is needed to be functional for every country.
- ICT will help Hospitals to improve quality care, patient data, and predictive analysis, etc.
- Provide some solutions for cross-border collaboration for CLMV

On behalf of the MOH, Prof. Eng Huot expressed thanks to all international participants for their hard work and time to have a successful workshop. He declared the workshop open.

5.1.2. Participants details

Total Invited: 54

Total Attendance : 49 (89%)

- Participants from Cambodia : 36
- Participants from Lao PDR : 5
- Participants from Myanmar : 2
- Participants from Vietnam : 1
- Participants from WHO : 2
- Participants from ADB : 2

5.1.3. Current HMIS and ICT Support in CLMV Countries

5.1.3.1. Cambodia – HMIS System. Presented by Dr. York Dararith

Brief Description

- The HMIS Web-Based implemented in June 2010 (www.hismohcambodia.org)
- The Ministry of Health started reviewing the National Health Information System in 1992 and revised 6 times.
- Every 3 or 5 years, HIS will be modified according to new indicators needed by each national program.
- Survey data available only every five years (CDHS).
- Routine data from health facility reports (HMIS) are key data source to annually monitor.
- Provide the Ministry of Health and different levels of the health system with reliable, timely, complete, valid information on health problems and health service activities for supporting in planning, monitoring of health services and decision making.

Strengths	Weakness	Challenges & Recommendations	Next / Goal
<ul style="list-style-type: none"> • Integration • Standardization • Simplicity • Reliability • Computerization • HIS strategic plan 	<ul style="list-style-type: none"> • Over workload and HIS Staff turn-over & Limited staff capacity • Quality of limited data • Limited use of information • Inadequate & Sustainable financial and technical support • Limited participation from the private sector for Reporting 	<ul style="list-style-type: none"> • Supervision on data recording, reporting EPMR & HIS web-based. • Training on capacity building of health staff • Strengthening data quality • Implement HIS at all Health Centers • Implementation of Review and Revised HIS 	<ul style="list-style-type: none"> • Better Information • Better Decision • Better Health

5.1.3.2. Lao PDR – HMIS System. Presented by Dr. Souphatsone Houatthongkham.

Brief Description

- There are two systems for a health information system. www.hmis.gov.la and www.Laos-his.gov.la
- Lao HMIS has been set up with routine data collection since 2008. The information was hardly generated and poorly used

- Progress of Implementation DHIS2 → 2014: OPD,IPD, MCH. | 2015: MAL | 2017: HIV, TB. | 2018: Event & Tracker Capture. | 2019: Tracker Capture, Family Folder.
- Data Entry in 2 Levels. Level 1: Data capture from Register Book, Treatment Information into DHIS2 Report form
- Level 2: Data Entry from DHIS2 form to DHIS2 system and Monitoring and Analysis.

Strengths	Weakness	Challenges & Recommendations	Next / Goal
<ul style="list-style-type: none"> • Strengthening the utilization of health information especially for planning and decision making. • Overcoming challenges of human resource capacity and infra-structure disadvantages. • provides a data warehouse • Dashboards for dissemination and use of information. 	<ul style="list-style-type: none"> • HMIS will be reported from paper data to the logbook • There is no server system available at the MOH 	<ul style="list-style-type: none"> • Developer’s knowledge is currently limited, still relying on experts from Oslo and Vietnam • IT staff’s knowledge is also limited to the poor use of IT systems. • Internet signals are not good. In some places, the information report could not be sent timely. 	<ul style="list-style-type: none"> • Update HMI Systematically in all service areas. • Create a centralized database for both the local server & the online server • Increase the knowledge of IT staff in each province • Build a centralized Programmer or IT solution team

5.1.3.3. Myanmar – HMIS System. Presented by Dr. Win Ei Ei Thaw

Brief Description

- Current HMIS system → <https://mm.dhis2.net/hmis/>
- Currently implementing in HMIS in Public Health Information, Hospital Information, Private Sector Information.
- Progress of Implementation 1995-2014 → Paper Based. | 2014-2017 → Public Health | 2017-2019: Hospital. | 2017-Now: Electronic-based.
- Mission: Generating and making accessible comprehensive, integrated and timely health information for decision making at different levels of the health system
- GOAL: To provide complete, valid, reliable, and timely health information for making the right decisions at the right time to ensure an equitable, effective, efficient and responsive health system

Strengths	Weakness	Challenges & Recommendations	Next / Goal
<ul style="list-style-type: none"> • Data verification built-in DHIS2 • Available more disaggregated data • Improve data quality in the timeliness • Access simultaneously by various levels: Central, Region/State, District and Township • Auto-generation of indicators 	<ul style="list-style-type: none"> • Limited workforce are trained • Turnover of health staff 	<ul style="list-style-type: none"> • Limited Basic Data analysis and Data presentation skill • Computer and IT literacy • Network coverage, Internet fees, • System maintenance • Continuous Monitoring and Supervision at all levels • Data checking 	<ul style="list-style-type: none"> • Implementation of Electronic Hospital Reporting System using DHIS2 • Strengthening of nation-wide Electronic Public Health Information System using DHIS2 • Integration of epidemiological surveillance reporting to existing national electronic platform DHIS2

5.1.3.4. Vietnam – HMIS System. Presented by Dr. Tran Van Tien

Brief Description

- The current HMIS system contains: eCDS, NIIS, EBS, SARI, Arbovirus and linked with the DHIS2 system for data analysis.
- Functions: Assists the Minister of Health in implementing state management functions and organizing the implementation of legal regulations in the field of preventive medicine nationwide
- Prevention and control of communicable and non-communicable diseases
- Border health quarantine
- Management of vaccines and laboratory testing
- Communication on preventive medicine related to risk factors

Strengths	Weakness	Challenges & Recommendations	Next / Goal
<ul style="list-style-type: none"> • Electronic Communicable Diseases System • National Immunization Information System • Data Warehouse • Community Involvement • Interoperability • Interactions with HIE 	<ul style="list-style-type: none"> • Limited workforce are trained • Lack of sustainable capacity • Turnover of health staff 	<ul style="list-style-type: none"> • Investment • Network in HIS • Standard data • Resources 	<ul style="list-style-type: none"> • Improve interoperability between different Information systems • Apply HL7 FHIR to connect between curative and preventive system • Implement EHR for national-wide • Use data from NIIS, eCDS, and NCDS for behavior change communication programs.

5.1.4. Question and Answers

Q 1: From the National Institute of Public Health to Cambodia.

PMRS patient card → If the Patient move from one place to another place, still card will work?
How to handle If Patient Forget or lose the card.

Answer: Currently PMRS patient card is being implemented and supporting patient's current place. It will not support for new place as it is implanted & saved in local health center, in feature, based on availability of infrastructure we make center system.

If existing patient does not show the card, lose the card, by entering name, mobile number, national id and address, the system will alert that patient already exists and show all details automatically.

Q 2: From Mr. Vanra to all countries.

Is there any LAW to regularize the process to force the Private sector to report the data into MOH?

Answer: There is No specific LAW available to force the private hospitals(Answer from all CLMV). Cambodia is trying to put some approval process to issue new license or renewal of license. If existing private hospitals did not report cases and apply for license renewal, we will not renew the license until they agree to share the information.

Q 3: Question to Cambodia.

Regarding Data upload and processing, if the system found any issue, how to solve and who needs to solve it? How Cambodia is making sure processed data is stored in secure place(Cloud/in-house)?

Answer: To upload data there are 12 indicators. Before uploading the data Health Center will check all indicators and make sure all data are entered correctly. If data is saved and still there is edit option, the responsible person can edit and resubmit. Once data is marked "PASS" it will not allow editing.

Initially, the development company configure all security guidelines and provide the training to IT staff of MOH. System has multiple authentication mechanisms like user name, password & security code.

Q 4: To Cambodia.

How database backup is working? Is it a manual process or automated process?

Answer: Any time IT staff can take manual backup, system also take auto-backup on defined interval(Everyday night 2 AM, etc.)

If the existing patient does not show the card or lose the card, by entering the name, mobile number, national id, and address, the system will alert that the patient already exists and shows all details automatically.

Q 5: From Mr. Samnang to all countries.

How to solve the Issues coming in DHIS2, how to find the right resource to solve the issue?

Answer: Lao PDR → We also have resource issue as everyone knows Government has shortage of IT staff. Currently, data entry staff communicate with district-level & national level teams via Chat and try to troubleshoot the issue.

Q 6: From Myanmar To Lao DPR

Who is the person to enter the data from hard copy to DHIS2? How they are entering the data?

Answer: Assigned staff (trained in DHIS2 data entry) is responsible to collect all hard copies from all the wards and enter the data to DHIS2 by themselves.

Q 7: From ADB To all countries

Any possibility to share the data from across the countries?

Answer: Technically yes, need to find the dashboard and need to finalize what data are needed to be shared, who will share, when to share.

Every year there is DHIS2 training from every country. Technical staff should attend to get the knowledge of the current DHIS2

5.2. AFTERNOON SESSION

5.2.1. INTRODUCTION Of DIGITAL HEALTH – Dr. Vlandimir Choi, WHO

- Use of digital technologies (ICT) for health
- Digital Health Interventions
- Digital Health Global Goods(Software)
- Digital Health Standards (Data)
- Health System – Strengthened By Digital Health Solutions
- Information & Communications Technology
- Digital Health Ecosystem
- Digital Health Architecture
- Principles For Digital Development
- Principles For Donor Alignment for Digital Health

5.2.2. Presentation on Regional ICT Development – Dr. Kyi Thar, ADB

- Rationale to support ICT application on CDC surveillance
- ADB values and investment related to ICT
- Possible ADB strategies and support for ICT
- Way forward for regional ICT development

5.2.3. Current Status of Surveillance Systems in CLMV Countries and their interoperability.

5.2.3.1. Cambodia – Surveillance System. Presented by Mr. Sok Samnang

Brief Description

- Current Multiple systems are using: Indicator-Based Surveillance (Web-based system, DHIS 2), Event-based(Hotline etc), Sentinel Surveillance, AMR, CamLIS - (Web-based system, Developed by WHO);
- Functions: Assists the Minister of Health in implementing state management functions and organizing the implementation of legal regulations in the field of preventive medicine nationwide; and
- Prevention and control of communicable and non-communicable diseases.

Strengths	Challenges	Recommendations	Next Step
<ul style="list-style-type: none"> • IBS: 85% to 95% Timeliness and Completeness of data • Weekly report summary (IBS and EBS) • Hotline Reporting • EBS System access 24X7 • CDC - Quickly get all disease information 	<ul style="list-style-type: none"> • Limited ICT capacity at national level • IBS • EBS • CDC Central Dashboard • Resource Mapping 	<ul style="list-style-type: none"> • Developers should explore all system issues and requirements before developing a new system • Staff commitment • Standard system language development for further expansion and interoperability 	<ul style="list-style-type: none"> • Request ADB to extend the consultant's works on the development of CDC Central Dashboard • Upgrade DHIS 2 (version 2.30) Upgrade Event Monitoring System • Add more functions Hotline • hotline support to migrants

5.2.3.2. Lao PDR – Surveillance System. Presented by Dr. Souphatsone Houatthongkham

Brief Description

- Epidemiological Surveillance: Indicator based Surveillance(IBM), Event Based Surveillance(EBS)
- Laboratory Surveillance : Diarrhea sentinel surveillance sites, AMR sentinel surveillance sites (1 Central hospital, 2 provincial hospitals), Dengue sentinel surveillance sites, Influenza sentinel surveillance sites, Zika sentinel surveillance sites (1 central hospital, 2 provincial hospitals).
- 18 national notifiable diseases/symptoms
- Data Reporting using WhatsApp & Line Group

Strengths	Challenges	Recommendations	Next Step
<ul style="list-style-type: none"> • Data is stored in one location for all programs • Anyone with an internet connection and the proper credentials can access the system • Pre-defined and customized data analysis 	<ul style="list-style-type: none"> • There are no IT officers • Budget/Resources is limited (Research & Development) 	<ul style="list-style-type: none"> • Developers should explore all system issues and requirements before developing a new system • Staff commitment • Standard system language development for further expansion and interoperability 	<ul style="list-style-type: none"> • Translation of all data field to Lao • NCLE User role: Data entry and Analysis user • Training program on DHIS2 NCLE • Threshold • Data Dictionary

tools shared by all users <ul style="list-style-type: none"> The system allows for both one-click reporting as well as dynamic, custom analysis 			
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5.2.3.3. Myanmar – Surveillance System. Presented by Dr. Kay Thi Khine

Brief Description

- web-application for surveillance system (GMS Health Security Project). Consist of two main components: Indicator based Surveillance(IFS), Event-Based Surveillance(EBS)
- DUNS 17 diseases.
- Existing Surveillance system on Principal Epidemic Diseases (PED), Integrated AFP Surveillance (Polio/ Measles/ NNT), Adverse Events Following Immunization (AEFI) Surveillance, New Emerging, Re-Emerging disease surveillance (ILI / SARI), Bioterrorism surveillance (Anthrax), NCD Surveillance, Integrated Disease Surveillance (Including TB, Malaria, HIV/AIDS etc), Rubella, Border Area Surveillance.

Strengths	Challenges	Recommendations	Next Step
<ul style="list-style-type: none"> RSO team - supportive in Outbreak response in addition to AFP surveillance The outbreak response plan is available and disseminated to all BHS (All level) 	<ul style="list-style-type: none"> Human Resources (designated focal person) for data management Regular review and feedback mechanism for surveillance data for action Data quality management Private sector involvement Migration 	<ul style="list-style-type: none"> Inter-sectoral cooperation and collaboration Additional technical assistance required for VPD surveillance and data quality improvement 	<ul style="list-style-type: none"> To integrate surveillance and outbreak application in line with the DHIS 2 platform To specify levels in user account To plan budget allocation for annual bandwidth charges

5.2.3.4. Vietnam – Surveillance System. Presented by Dr. Tran Van Tien

Brief Description

- SURVEILLANCE SYSTEM OF CDs, In Vietnam, using Technically Vertical Management
- CD surveillance system include INDICATOR BASED SURVEILLANCE and EVENT BASED SURVEILLANCE
- Online Reporting and Patient Registry System from commune health station to district health center and province and central level GDPM by ECDS
- 43 communicable diseases Covered in reporting

Strengths	Challenges	Recommendations	Next Step
<ul style="list-style-type: none"> • The surveillance system at all levels. • Indicator based system (including sentinel) • Event-based surveillance systems • Electronic reporting for all CDs • Rapid Risk Team • Enhance the role of FETP 	<ul style="list-style-type: none"> • Vietnam is located in a hot spot in the region • Vietnam is connected to the dynamic world: travels, trades.... 	<ul style="list-style-type: none"> • New emerging, re-emerging infectious diseases potentially occur in un-predictable places, in when... • Climate change rapidly influence to human, animal, environment interference • Limited resources (human, finance....) 	<ul style="list-style-type: none"> • Vietnam needs to continue to improve its capacity for public health event preparation and response as required by the IHR and guided by the APSED. • Strengthening preparedness and response capacities is extremely necessary. • International cooperation, especially with WHO.

5.2.4. Question and Answers

Q1 – From the National Institute of Public Health to All Countries.

Almost Every country is having human resource and financial challenges and all are saying we need to move forward. How it is possible without solving current problems? Sustainability is the most important. 1. Political, 2. Technical, 3. Financial

Answer: Dr. Ly Sovann → Now we have new tools available which help lot to get more details and help to simplify the process.

5.2.5. Group Discussion (4 Teams) on using ICT to support Health Cooperation in the GMS countries

5.2.5.1. The topics for Group 1 & 2

- Identify what are regional health concerns that need to cooperate among GMS countries and challenges.
- Identify the role of hotline and ICT (including mobile app) to support regional health cooperation among GMS population

5.2.5.2. The Topics for Group 3 & 4

- Identify challenges of existing health management information system
- Identify challenges of current hospital management information system in the context of supporting real-time disease outbreak alert and response.

5.2.5.3. Group-wise Details

Group 1	Group 2	Group 3	Group 4
Facilitator: Dr. Yi seng Doeurn Mr. Sok Samnang	Facilitator: Mr. Pankaj Mr. Eng Sarath	Facilitator: Dr. York Dararith Dr. Vladimir Choi	Facilitator: Dr. Sau Sokuna Mr. Leng Vanra
Dr. Seng sopheavy Dr. Heng sopheab Dr. Torn vuthy Mr. Say khay Dr. Keo sopheaktra Dr. southanou nathanontry Mr. Xayphone Saechao Dr. Chaw Nande	Dr. Sok Srun Dr. Horn Rith Dr. Ung Rattana Dr. Bou Sour Dr. Voerung Bunreth Dr. Souphatsone Houatthongkham Dr. Ke Rotha	Mr. Pinn ampor Mr. Ing Leng Dr. Yenn Roumany Dr. heng Chantha Dr. Hong Phalla Dr. ang neang Ms. Amphai khamsing Dr. Win Ei Ei Thaw	Mr. Chab Sat Mr. Sring Virakpheap Dr. Has Phalmomy Dr. Chor Vichet Dr. Kung Lo Dr. Long Suthereak Mr. Neang Sopheng Dr. Tran Van Tien Mr. Lek Sidavong Dr. Kay Thi Khine

5.3. MORNING SESSION

5.3.1. Day – 1 RECAP (Rapporteur)

Rapporteur Recap the 5th September Workshop details

- Opening Session
- Group Photo
- CLMV Current HMIS System Summary
- Question and Answers
- CLMV Surveillance system summary
- Question and Answers
- A glimpse of Group Discussion

5.3.2. Presentation on Group Discussion Topics

5.3.2.1. Summary of Group - 1

<p>Identify what are the regional health concerns that should be coordinated among GMS Countries and challenges.</p>	<p>Identify the role of hotline and ICT (including mobile app) to support regional health cooperation among GMS population</p>
<ul style="list-style-type: none"> • H5N1 • Ebola, MERS-CoV • Dengue • Rabies • Hand foot mouth disease • Malaria • Tuberculosis • Cholera • Challenges Capacity System Preparedness <ul style="list-style-type: none"> • RRT • Isolation wad • PPE • Laboratory testing Financial 	<ul style="list-style-type: none"> • Mobile App (For Android & iOS) • Should be the standard platform, could be used among CMLV • Country local point for IHR & GMS • Sharing Information (Event-Based, Routine) • Referral System • Simulation Exercise joint outbreak investigation • POE • Video Conference (EOC) • Emergency contact Mechanism

5.3.2.2. Summary of Group – 2

Identify what are regional health concerns that should be coordinated among GMS Countries and challenges.	Identify the role of hotline and ICT (including mobile app) to support regional health cooperation among GMS population
<ul style="list-style-type: none"> • Migrant workers/ tourist/business travelers have difficulties to access the health care services when they are out of the countries (due to communication) • Disease outbreak/communicable disease data is not being shared among GMS countries. • Illegal logger (Malaria) who gets sick when they are at the border/cross-border. • Soldiers at borderline who gets sick (Malaria) 	<p>Building a Mobile App</p> <ul style="list-style-type: none"> • Work offline/Online work features • Has maps/resource maps that consist of location/info. of nearby health care. • Can get user location/info to trace/detect through a mobile app • User Notification/Alert/SMS in mobile app • Have guidelines/tips, prevention action, images, video. • Or even language translation if possible. • Create Communication group chats among GMS • To have a centralized PMRS system so that One ID number at health facilities among GMS provinces <p>Hotline</p> <ul style="list-style-type: none"> • Hotline helps on reporting any public health concerned by public/community • By selecting appropriate option after calling on 115, the caller can get information about diseases info (to be developed in multiple languages) • The hotline can be used in case of internet failure as hotline can work mobile coverage as an emergency service. • Caller data automatically stored in the database and so that we can share to respective ministry/department

5.3.2.3. Summary of Group – 3

Identify challenges of existing health management information system	Identify challenges of the current hospital management information system in context of supporting real-time disease outbreak alert and response.
<ul style="list-style-type: none"> • Enhancing information use & Strengthening data quality • Expanding HIS computerization at all health center having electricity • Implementation of reviewed and revised HMIS to PMRS • Limited IT human resource & Lack of IT support after implementation • Limited report from the private sector • Limited financing for training, supervision, and monitoring • No delegated role for data collection • Political commitment for recruiting IT staff in MOH • Capacity building of existing staff about IT literacy and data management • Integrating different data sources into one information system • Server Management • Only one diagnosis report in HO2 and HC1 	<ul style="list-style-type: none"> • Rarely analyze and interpreted disease outbreak alert and response. • The national hospital has no alert system for outbreak cases • No dedicated staff for data entry/report for surveillance system • To create a common dashboard in DHIS2 for surveillance system • For recording open MRS in both OPD and IPD data • Urgently needed to establish unit patient ID • Limited human resources for data entry in all levels of hospital

5.3.2.4. Summary of Group - 4

Identify challenges of existing health management information system	Identify challenges of current hospital management information system in the context of supporting real-time diseases outbreak alert and response
<p>Technical</p> <ul style="list-style-type: none"> • Need to link with the surveillance system • Lack of data from private health • Limited data analysis and feedback • Data Quality? <p>Human Resource</p> <ul style="list-style-type: none"> • Lack of IT staff maintenance (IT support) • The burden of HMIS staff • The limited workforce goes on training. • Staff turn-over rate is very high <p>Infrastructure</p> <ul style="list-style-type: none"> • Limited IT infrastructure (internet + computers etc.) • No space for server management/maintenance 	<ul style="list-style-type: none"> • Lack of opportunities for IT Training • No standard patient code • Lack of IT equipment/software • Not enough staff and budget • No data analysis or Not done • Lack of communication • No incentive • Network converge

5.3.3. Discuss on Action Plan including PRIORITY, PLANNING & RECOMMENDATION

Refer Section 7 & 8 (Conclusion and proposed follow up activities)

5.4. AFTERNOON SESSION

5.4.1. Summary of the Workshop and Ways Forwards (Rapporteur)

- Rapporteur RECAP 2 days workshop details
- Provide the summary of each session
- Common Concerns
- Questions and Answers
- Summary of Workshop
- Common Findings and Suggestion

5.4.2. CLOSING SESSION

- Dr. Southanou Nanthanonty, Deputy Director Department of Planning and Cooperation and GMS Health Security Project, Lao PDR.
- Dr. Chaw Nande, Deputy Director Department of Medical Services, Myanmar.
- Dr. Tran Van Tien, Project Officer GMS health Security Project, Vietnam.
- Dr. KYI Thar, Public Health Expert, ADB
- Closing by Dr. Lo Veasnakiry, Director of the DPHI, Cambodia.
- Thanks note to all participants

- Handover the Group Photo & Workshop documents drive

6. Common Gaps, Challenges

- Lack of HIS Staff
- Lack of Trained Staff to use the system
- Internet connectivity
- Lack of IT resources to support the current system
- Server maintenance & system management staff
- Investment

7. Collaborative Plan of Action for intervention and coordination

- How to share critical and important data between countries in an automated way.
- Should have processes and guidelines to share the common IT support for All CLMV countries.
- Provide basic troubleshoot training for hospital staff (who are inserted)
- How to get information from private hospitals
- CLMV countries should conduct 1 or 2 workshops in a year to discuss current issues and how these were solved? So that this knowledge will help to solve these type of issues in future.
- Unique ID for members in CMLV (at least for Migrants)

Conclusion and proposed follow up activities

7.1. Group 1

PRIORITY	RECOMMENDATION	NEXT STEP
<ul style="list-style-type: none"> • Mobile app for sharing Routine, emergency information. Support platforms - (Android, iOS) • MOU/LOA for sharing information and patient referral, evidence-based surveillance • Annual Meeting/Workshop for implementing ICT in surveillance/After Action Review (AAR). • Simulation exercise/Table top exercise on outbreak response. • Piloting Unified ID for the migrant population. 	<ul style="list-style-type: none"> • Urge the development partner to support the development of mobile apps and unique ID • Develop and implement the mobile app • Plan for MOU/LOA/report to the higher authority • Plan and allocate budget for the annual meeting • Consider and agree on pilot project for a unified ID. 	<ul style="list-style-type: none"> • Convince and obtain approval from the respective decision-maker (Minister of Health) • Discuss with respective ICT teams and professionals to identify the detailed specification for mobile apps. • Further discussion and regular communication on LOA/annual plan/simulation exercise. • Distribute workshop output and contact

7.2. Group 2

PRIORITY	RECOMMENDATION	NEXT STEP
<ul style="list-style-type: none"> • Strengthening surveillance at the Point of Entry (PAX health monitoring, provide short info/guidelines with the declaration form.) • Regular Campaign (Preventive actions on diseases, malaria, dengue, flue, etc.) by using poster at PoE, through social media. 	<ul style="list-style-type: none"> • Data sharing on priorities diseases • SOP for HMIS • Hotline ASEAN languages option • Isolation room at POE if not exit • Communication group chats app for ICT, PoE, Regional. • Meeting of ASEAN countries for sharing their innovative ICT implementation • One Patient one ID. 	<ul style="list-style-type: none"> • ICT meeting for developing Mobile App, multi-languages option on the hotline and finalizing SOP.

7.3. Group 3

PRIORITY	RECOMMENDATION	NEXT STEP
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Human Resources for ICT	Recruiting IT Staff	<ul style="list-style-type: none"> • ICT training for the health care workforce (e.g., developing a learning network) • Both GMS and national ICT working group discussion
Political Commitment	Advocacy, stimulation of policymakers	The inter-ministerial meeting between GMS leaders
Financial Support and sustainability	The delegated budget line of ICT (infrastructure and staff)	Introducing new business models (Outsourcing, Public-Private Partnership)
Lack of data integration and visualization	Develop a mobile app (IOS/Android/etc.)	<ul style="list-style-type: none"> • Maintain and update a common platform in each country • Develop one common platform among GMS countries
Data Management and utilization	Enabling environment for health information and ICT	<ul style="list-style-type: none"> • Develop and harmonize legislation, strategic plan, SOP, and guideline • for data protection among GMS countries

7.4. Group 4

PRIORITY	RECOMMENDATION	NEXT STEP
<ul style="list-style-type: none"> • Data quality <ul style="list-style-type: none"> ○ Link with system ○ Networking among clinicians, labor technicians surveillance person as well as support from top management team/top leaders • SOPs development • Financial support • Technical support • Sharing information among GMS countries <ul style="list-style-type: none"> ○ Public sector ○ Private sec ○ And region 	<ul style="list-style-type: none"> • Each country should develop a Patient ID • Train clinician to understand the importance of the system and on how to use it effectively • Each country has to enhance the system properly to use/manage/transfer the data • Risk assessment: Routine activities, Annually activities, etc. • SOP for data management <ul style="list-style-type: none"> ○ Financial support - Government, Stakeholder, Network, etc. • Technical support as above mentioned + capacity building • Sharing information <ul style="list-style-type: none"> ○ Each country has to develop SOPs for sharing information ○ Learn from each other's country (study tours) 	<ul style="list-style-type: none"> • ADB standard form for SOPs • Set up the main indicator by the system.

8. Glimpse of Workshop

8.1. Group Photo



សិក្ខាសាលាថ្នាក់តំបន់ស្តីពីការប្រើប្រាស់បច្ចេកវិទ្យាព័ត៌មានសម្រាប់
ប្រព័ន្ធគ្រប់គ្រងសុខាភិបាល កម្ពុជា ប្រទេសឡាវ ប្រទេសមីយ៉ាន់ម៉ា និងប្រទេសវៀតណាម
(កម្ពុជា ឡាវ មីយ៉ាន់ម៉ា និងវៀតណាម)
ថ្ងៃព្រហស្បតិ៍ ទី៣កើត ដល់ថ្ងៃស្រុក ៦កើត ខែកុម្ភៈ ឆ.ស ២៥៦៣
០៥-០៦ ខែកញ្ញា ឆ្នាំ២០១៩
សណ្ឋាគារសោមាទេវីអង្គរ ខេត្តសៀមរាប ព្រះរាជាណាចក្រកម្ពុជា



Regional Workshop on Information and Communication
Technology (ICT) Application for Surveillance System
GMS Health Security Project
(Cambodia, Lao PDR, Myanmar and Vietnam)
5-6 September 2019
Somadevi Angkor Hotel, Siem Province, Cambodia



8.2. Group Discussion Photos







9. Annexes

9.1. List of Delegates (CAMBODIA)

No	Name of Participant	Sex	Title
CAMBODIA Delegates			
I Honor Guest			
1	H.E. PROF. ENG HUOT	M	Secretary of State for Health, Project Director
II Participants (National)			
1	DR. LO VEASNAKIRY	M	Director, Department of Planning and Health Information, (DPHI), Program Coordinator
2	DR. LY SOVANN	M	Director, CDC Department, Ministry of Health
3	DR. SOK SRUN	M	Director, Hospital Services department, DHS
4	DR. SAU SOKUNNA	M	Deputy Director, Hospital Services department, DHS
5	DR. YI SENG DOEURN	M	Deputy Director, Surveillance and Response Bureau, CDCD
6	MR. SOK SAMNANG	M	Deputy Director, CDC Department, Ministry of Health
7	Dr. SENG SOPHEAVY	M	Officer, CDC Department, Ministry of Health
8	MR. PINN AMPOR	M	IT Officer, CDC Department , Ministry of Health
9	MR. ENG SARATH	M	IT Officer, CDC Department , Ministry of Health
10	MR. CHAB SAT	M	Vice Chief of Bureau Health Economic and Financing (BHEF), DPHI
11	DR. YORK DARARITH	M	Vice Chief of Bureau Health Information System, DPHI
12	MR. SRING VIRAKPHEAP	M	Officer of Bureau Policy, Planning and reform, Ministry of Health, DPHI
13	MR. ING LENG	M	Officer of Bureau Health Information System, DPHI
14	DR. HENG SOPHEAB	M	Deputy Director, NIPH
15	Dr. HAS PHALMONY	M	Deputy Head Technical Bureau, NIPH
16	DR. YENN ROUMANY	M	Vice Chief of Technical Bureau, KSFH.
III Government Provincial			
1	Dr. KE ROTH	M	Director, Svay Rieng PHD
2	Dr. HORN RITH	M	Deputy Director, Prey Veng PHD
3	DR. HENG CHANTHA	M	Chief of Technical bureau, Kampot PHD
4	DR. CHOR VICHET	M	Deputy Director, Kandal PHD
5	DR. TORN VUTHY	M	Deputy-Director, Stung Treng PHD
6	DR. UNG RATTANA	M	Director, Rattanakiri PHD
7	DR. BOU SOUR	M	Director, Mondulkiri PHD
8	DR. HONG PHALLA	M	Chief of Technical bureau, Kratie PHD
9	MR. SAY KHAY	M	RRT Chief, Tbong Khmum PHD
10	DR. KUNG LO	M	Director, Preah Vihea PHD
11	DR. VOEURNG BUNRETH	M	Director, Battambang PHD
12	DR. ANG NEANG	M	Director, Pailin PHD
13	DR. KEO SOPHEAKTRA	M	Director, Banteay Meanchey PHD
14	DR. LONG SUTHEREAK	M	Chief of Pediatric, RH Poi Pet
15	MR. NEANG SOPHENG	M	IT Officer, Khmer-Japan Friendship Provincial Hospital
III Wokshop logistic arrangement			
1	MR. MOM VORTANA	M	Planning, Monitoring and IT Specialist ADB/GMSHSP
2	MS. KUNG BORA	F	Project Administrator ADB/GMSHSP
3	MS. OUK LEAKHENA	F	Assistant Accountant ADB/GMSHSP
4	DR. SOM CHUMDAKA	M	Community Development Specialist
IV ADB			
1	DR. KYI THAR	M	Public Health Specialist, ADB
2	MR. PANKAJ WANJARI	M	ADB ICT Consultant
V WHO			
1	DR. VLADIMIR CHOI	M	Consultant in Digital Health Who Country Office in Cambodia/ Health Systems(HSD)
2	MR. IENG VANRA	M	Information System and Surveillance Technical Officer

9.2. List of Delegates (MYANMAR)

No	Name of Participant	Sex	Title
MYANMAR Delegates			
1	DR. CHAW NANDE	F	Deputy Director Medical Care Division, Department of Medical Service, Ministry of Health and Sports
2	Dr. EI EI THAW	F	Assistant Director, Health Management Information System Division, Department of Public Health, Ministry of Health and Sports
3	Dr. KAY THI KHINE	F	Team Leader (CEU/EPI)

9.3. List of Delegates (LAO PDR)

No	Name of Participant	Sex	Title
LAO PDR Delegates			
1	DR. SOUTHANOU NANTHANG	M	Deputy Project Director, HSProject Department of Planning and Cooperation MOH
2	DR. SOUPHATSONE HOUAT	M	Epidemiologist, NCLE, MOH National Center for Laboratory and Epidemiologist
3	MS. AMPHAI KHAMSING	F	Epidemiologist, NCLE, MOH National Center for Laboratory and Epidemiology
4	MR. LEK SIDAVONG	M	Technical Officer, DHR, MOH Department of Health Care
5	MR. XAYPHONE SAECHAO	M	Statistic Officer, Luangphrabang Provincial Health Department

9.4. List of Delegates (VIETNAM)

No	Name of Participant	Sex	Title
Vietnam Delegates			
1	DR. TRAN VAN TIEN	M	Project Officer, GMS Health Security Project

Approved by:

Dr. Lo Veasnakiry

Director of DPHI and Project Coordinator